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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,349	11/03/2003	Espen Haugs	MAG-004	5257
22832	7590	09/01/2005	EXAMINER	
KIRKPATRICK & LOCKHART NICHOLSON GRAHAM LLP (FORMERLY KIRKPATRICK & LOCKHART LLP) 75 STATE STREET BOSTON, MA 02109-1808			MAI, ANH T	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/700,349

Applicant(s)

HAUGS ET AL.

Examiner

Anh T. Mai

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-24 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>pgs.</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election without traverse of group I, claims 1-14 in the reply filed on June 20, 2005 is acknowledged. In the instant application, claims 15-24 have been withdrawn from further consideration. Claims 1-14 have been considered and examined. The office action is as follow.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to claim 1, "magnetic path part" appears to be an abstract element, so it is not clear how the "magnetic path part" having concrete element "wire-shaped bodies". In claims 1 and 9, it is not clear what applicant intend "wire-shaped bodies", please clarify.

The following rejections are made based on the examiner's best interpretation in light of the 35 U.S.C. 112 rejections.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 1-2, 4, 5, 6, 9, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over DelVecchio et al. [US 4595843].

DelVecchio discloses end pieces 56, 58 for magnetic coupling of core parts 49, 51 for a closed magnetic flux, the end piece having a wire shape bodies 52, 54 with an end surfaces and abutment surface abutment of magnetic path part against the core part and the abutment surface comprises the end surfaces of wire-shaped bodies [figure 6].

With respect to claim 4, magnetic path part is hollow [figures 4-5].

- With respect to claims 5-6, the end pieces form an arc with radius  $r$ ,  $r_0$  as shown in figure 4.

With respect to claim 8, the annular surfaces are cylindrical and have a uniform thickness [figures 3A, 4].

With respect to claims 12-13, the core having two adjacent cylindrical core parts and two ends pieces [figures 5-6].

FIG. 6. The transformer 47 includes cylindrical cores 49 and 51 placed side by side. The longer the cylindrical cores 49 and 51, the less important are the at the ends of the cores effects. Also, the end effects may be reduced by completing the flux path with semicircular end caps 56 and 58 constructed of core material. The end caps 56 and 58 could also be cylindrical and joined to the cylindrical cores 49 and 51 by means of miter joints

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 3 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over DelVecchio et al. in view of Abe et al. [6531946 B2].

DelVecchio et al. disclose the invention as claimed as cited above except for the magnetizable material being iron. Abe et al. disclose a wound and laminated iron core [claim 1, abstract] and ferritic core (sintered magnetic core) as discloses in column 12, lines 43-50. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use iron sheet core as taught by Abe to DelVecchio et al. The motivation would have been to utilize good physical magnetic characteristics of iron for the magnetic coupling purposes. Therefore, it would have been obvious to combine Abe with DelVecchio et al.

The above-described reactors use a magnetic core having a wound and laminated iron core prepared by winding a soft magnetic thin strip in a circular ring shape or in an elliptical ring shape. However, a reactor giving further low noise and loss and which is also easy to manufacture may also be prepared by using a block magnetic core such as ferritic core (sintered magnetic core) and dust core and by adhering the coil to the magnetic core using a resin.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over DelVecchio et al. in view of Hernandez Cruz [US 6535099 B1].

DelVecchio et al. disclose the invention as claimed as cited above except for the core part having rectangular cross section. Hernandez Cruz discloses the core forming of wound steel strip and having cross section of a rectangular [figure 2]. It would have been obvious to a person of ordinary skill in the art to have rectangular cross section core as taught by Hernandez Cruz to DelVecchio et al. The motivation would have been to provide different configurations of the core for accommodating certain desired devices. Therefore, it would have been obvious to combine Hernandez Cruz with DelVecchio et al.

the Wescore core is formed from a wound steel strip in a continuous form to which sequential cuts are realized in order to allow it to be disassembled and reassembled around the coil. In other words, coils and cores are manufactured in two separate processes, the core being

reassembled thereafter on the coil thanks to the cuts realized on the core sheets. The cross section of this type of core is generally rectangular.

*Allowable Subject Matter*

6. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 recites inter alia, *the inner annular surface has the same area as the outer annular surface*.

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Scarzello et al. [6278272 B1] ; Zinders et al. [6232865 B1] ; Vinciarelli et al. [6653924 B2].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**ANH MAI**  
**PRIMARY EXAMINER**